



Department of Biotechnology

1.3.2 Details of value-added courses for imparting transferable and life skills offered during the year 2022-23

1.3. 2 INDEX

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2	Value added course completion proof -certificates of the students for AY 22-23	5-97
3	Value added courses- codes- list of students completed and the syllabus etc	98-140



1.3.2 Details of Value added courses completed by BTech Biotechnologystudents
AY 2022-23

S. No.	Student name	Roll no	Course name	Page nos of proofs
1	Chunduru Sai HariHara Sudheshna	160120805008	Wildlife ecology	6-8
			Nanotechnology in agriculture	
			Maternal infant young child nutrition	
2	Divya prema	160120805008	Nanotechnology in agriculture	9-14
			Technology for clean and renewable energy production	
			Current regulatory requirements for conducting clinical trials in india for investigational new drugs ver.3.0	
			Conservation geography	
			Drug delivery: principles and engineering	
Conservation economics				
3	Jyothika Meenakshi Kambhampati	160120805013	Conservation geography	15-18
			Enzyme sciences and technology	
			Human molecular genetics	
			Conservation economics	
4	Neha reddy m	160120805017	Maternal infant young child nutrition	19-23
			Conservation economics	
			Enzyme sciences and technology	
			Wildlife ecology	
			Conservation geography	
5	P Sravani	160120805023	Maternal infant young child nutrition	24-28
			Conservation economics	
			Conservation geography	
			Current regulatory requirements for conducting clinical trials in india for investigational new drugs ver.3.0	

			Technology for clean and renewable energy production	
6	B Shreya	160120805027	Conservation economics	29-34
			Forest and their management	
			Technology for clean and renewable energy production	
			Wildlife ecology	
			Conservation geography	
			Drug delivery:principles and engineering	
			Current regulatory requirements for conducting clinical trials in india for investigational new drugs ver.3.0	
7	S Spoorthi	160120805032	Conservation geography	35-39
			Wildlife ecology	
			Genome editing and engineering	
			Enzyme sciences and technology	
			Bioreactors	
8	Sb Aniruddha	160120805041	Conservation geography	40-44
			Conservation economics	
			Enzyme sciences and technology	
			Maternal infant young child nutrition	
9	Bahde Nithin R	160120805043	Nanotechnology in agriculture	45-50
			Forest and their management	
			Technology for clean and renewable energy production	
			Current regulatory requirements for conducting clinical trials in india for investigational new drugs ver.3.0	
			Conservation geography	
			Drug delivery:principles and engineering	
10	Chetan babu	160120805052	Nano technology in agriculture	51-56
			Conservation economics	
			Forest and their management	

		Current regulatory requirements for conducting clinical trials in india for investigational new drugs ver.3.0	
		Technology for clean and renewable energy production	
		Conservation geography	

11	Phalguni nadiger	160118805018	Maternal infant young child nutrition	57-58
			Forest and their management	
12	Muskan	160121805030	Wildlife ecology	59-60
			Maternal infant young child nutrition	
13	Rekham poojitha	160121805036	Biomechanics of joints and orthopaedic implants	61-63
			Forest and their management	
			Conservation economics	
14	Lakshmi prasanna sai madamanchi	160121805024	Conservation geography	64-67
			Biomechanics of joints and orthopaedic implants	
			Forest and their management	
			Conservation economics	
15	Cambampaty akshita naidu	160121805008	Wildlife ecology	68-69
			Forests and their management	
16	Lokam pranavi sri sai	160121805023	Biomechanics of joints and orthopaedic implants	70
17	Nidhi bhide	160121805032	Wildlife ecology	71
			Drug delivery: principles and engineering	72
18	Roshini perumal	160121805038	Enzyme sciences and technology	73
19	Shamitha d	160121805009	Wildlife ecology	74
20	Punreddy akshitha	160121805034	Ecology and environment	75-78
			Nanotechnology in agriculture	
			Bioengineering: an interface with biology and medicine	
			Medical biomaterials	
21	Bikkumalla shruti	160121805006	Ecology and environment	79-81
			Forest and management	
			Conservation economics	
22	Kandimala venkat keerthan	160121805054	Biomass conversion and biorefinery	82-85
			Wildlife ecology	
			Forests and their management	
			Maternal infant young child nutrition	
23	Manikonda rahul	160121805056	Wildlife ecology	86-87
			Forests and their management	
24	Gilkapally koushik	160121805050	Wildlife ecology	88-89
			Forests and their management	
25	Guthikonda sai prashanth	160121805052	Wildlife ecology	90
26	Dhruv tadikonda	160121805048	Bioreactors	91-97

			Nanotechnology in agriculture	
			Forests and their management	
27	Gadda thabitha	160121805011	Wildlife ecology	98


 Y. K. Jaiswal
 Dept. of Bio-Technology
 Chaitanya Chartered Institute of Science
 Gandpet, Hyderabad-500 076.

Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
CHUNDURU SAI HARI HARA SUDHESHNA
for successfully completing the course



Wildlife Ecology

with a consolidated score of **75** %

Online Assignments	19/25	Proctored Exam	55.5/75
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Total number of candidates certified in this course: 3438

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jul-Oct 2022

(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL22BT55543695074

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

CHUNDURU SAI HARI HARA SUDHESHNA

for successfully completing the course

Nanotechnology in Agriculture

with a consolidated score of **63** %

Online Assignments	10.42/25	Proctored Exam	52.5/75
--------------------	----------	----------------	---------

Total number of candidates certified in this course: **1015**

Pathish
Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Satyaki Roy
Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL23BT30S44723934



To validate the certificate

No. of credits recommended: 2 or 3



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

CHUNDURU SAI HARI HARA SUDHESHA
for successfully completing the course

Maternal Infant Young Child Nutrition

with a consolidated score of **76** %

Online Assignments	16.91/25	Proctored Exam	59.25/75
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Total number of candidates certified in this course: 1212

Jan-Apr 2023
(12 week course)

Prof. Sridhar Iyer
Head COSEP & NPTEL Coordinator
IIT Bombay



Indian Institute of Technology Bombay



Roll No: NPTEL23BT01S53754901



To validate the certificate

No. of credits recommended: 3 or 4



NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

DIVYA PREMA

for successfully completing the course

Nanotechnology in Agriculture

with a consolidated score of **52** %

Online Assignments	22.08/25	Proctored Exam	30/75
--------------------	----------	----------------	-------

Total number of candidates certified in this course: **1015**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Mar 2023

(8 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL23BJ30S34722682

To validate the certificate

No. of credits recommended: 2 or 3



NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

DIVYA PREMA

for successfully completing the course

Technologies for Clean and Renewable Energy Production

with a consolidated score of **65** %

Online Assignments	21.63/25	Proctored Exam	43.75/75
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Total number of candidates certified in this course: **371**

Prof. Sanjeev Manhas
Coordinator, Continuing Education Centre
IIT Roorkee

Jul-Sep 2022

(8 week course)

Prof. Prithi Maheshwari
NPTEL Coordinator
IIT Roorkee



Indian Institute of Technology Roorkee



Roll No: NPTEL22CH8S13010806

To validate the certificate

No. of credits recommended: 2 or 3



EMU

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

DIVYA PREMA

for successfully completing the course

Current Regulatory Requirements for Conducting Clinical Trials in India for Investigational New Drugs/New Drug (Version 3.0)

with a consolidated score of **65** %

Online Assignments	20/25	Proctored Exam	45/75
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Total number of candidates certified in this course: **306**

Prof. Sucheta Banerjee Kurundkar
Director Training,
CDSA

Jul-Sep 2022

(8 week course)

Prof. Andrew Thangaraj
NPTEL, Coordinator
IIT Madras



CDSA Clinical Development Services Agency



Roll No: NPTEL22GE25S23011751

To validate the certificate

No. of credits recommended: 2



NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

DIVYA PREMA

for successfully completing the course



Conservation Geography

with a consolidated score of **95** %

Online Assignments	19.97/25	Proctored Exam	75/75
--------------------	----------	----------------	-------

Total number of candidates certified in this course: **1028**

Fathish

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Satyaki Roy

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur

Jul-Oct 2022
(12 week course)



Indian Institute of Technology Kanpur



Roll No: NPTEL22BT54S33692788

To validate the certificate

No. of credits recommended: 3 or 4



NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

DIVYA PREMA

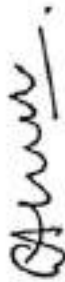
for successfully completing the course

Drug Delivery: Principles and Engineering

with a consolidated score of **43** %

Online Assignments	12.69/25	Proctored Exam	30/75
--------------------	----------	----------------	-------

Total number of candidates certified in this course: **206**


Prof. G. L. Sivakumar Babu
Chairman, Center for Continuing Education
IISc Bangalore

Jul-Oct 2022
(12 week course)


Prof. L. Umanand
NPTEL Coordinator
IISc Bangalore



Indian Institute of Science Bangalore



To validate the certificate

Roll No: NPTEL22BT41S53692745

No. of credits recommended: 3 or 4



NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

DIVYA PREMA

for successfully completing the course



Conservation Economics

with a consolidated score of 93 %

Online Assignments	23.75/25	Proctored Exam	69/75
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Total number of candidates certified in this course: 306

Ratish

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Apr 2023

(12 week course)

Satyaki

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



To validate the certificate

Roll No: NPTEL23BT28S53757166

No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
JYOTHIKA MEENAKSHI KAMBHAMPATI
for successfully completing the course



Conservation Geography

with a consolidated score of **97** %

Online Assignments	23.13/25	Proctored Exam	73.5/75
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Total number of candidates certified in this course: **1028**

Ratish

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jul-Oct 2022
(12 week course)

Satyaki

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL22BT54S43691943

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
JYOTHIKA MEENAKSHI KAMBHAMPATI
for successfully completing the course

Enzyme Sciences and Technology

with a consolidated score of **67** %

Online Assignments	17.56/25	Proctored Exam	49.5/75
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Total number of candidates certified in this course: 232

Jan-Apr 2023
(12 week course)

Prof. T. V. Bharat
Head, Centre for Educational Technology
NPTEL Coordinator, IIT Guwahati



Indian Institute of Technology Guwahati



Roll No: NPTEL23BT05S43751402

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
JYOTHIKA MEENAKSHI KAMBHAMPATI
for successfully completing the course

Human Molecular Genetics

with a consolidated score of **61** %

Online Assignments	13.33/25	Proctored Exam	48/75
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Total number of candidates certified in this course: 795

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Feb 2023
(4 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL23BT10S34724585

To validate the certificate



No. of credits recommended: 1 or 2



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
JYOTHIKA MEENAKSHI KAMBHAMPATI
for successfully completing the course



Conservation Economics

with a consolidated score of **93** %

Online Assignments	20.63/25	Proctored Exam	72/75
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Total number of candidates certified in this course: **306**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Apr 2023
(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Id No: NPTEL23BT28S53754357

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
NEHA REDDY MARAPALLI
for successfully completing the course




Maternal Infant Young Child Nutrition

with a consolidated score of **92** %

Online Assignments	22.94/25	Proctored Exam	69/75
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Total number of candidates certified in this course: 1212

Jan-Apr 2023
(12 week course)


Prof. Sridhar Iyer
Head COEEP & NPTEL Coordinator
IIT Bombay



Indian Institute of Technology Bombay





Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
NEHA REDDY MARAPALLI
for successfully completing the course



Conservation Economics

with a consolidated score of **94** %

Online Assignments	23.75/25	Proctored Exam	70.5/75
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Total number of candidates certified in this course: 306

Ratish

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Apr 2023

(12 week course)

Satyaki

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



ID No: NPTEL238T28563751719

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
NEHA REDDY MARAPALLI
for successfully completing the course

Enzyme Sciences and Technology

with a consolidated score of **60** %

Online Assignments	19.72/25	Proctored Exam	40/75
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Total number of candidates certified in this course: 232

Jan-Apr 2023
(12 week course)

Prof. T. V. Bharat
Head, Centre for Educational Technology
NPTEL Coordinator, IIT Guwahati



Indian Institute of Technology Guwahati



Roll No: NPTEL23BT05S33754047

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
NEHA REDDY MARAPALLI
for successfully completing the course



Wildlife Ecology

with a consolidated score of **99** %

Online Assignments	25/25	Proctored Exam	73.5/75
--------------------	-------	----------------	---------

Total number of candidates certified in this course: 3438

Ratish

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jul-Oct 2022

(12 week course)

Satyaki

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL22BT55543691856

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
NEHA REDDY MARAPALLI
for successfully completing the course



Conservation Geography

with a consolidated score of **91** %

Online Assignments	23.75/25	Proctored Exam	67.5/75
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Total number of candidates certified in this course: 1028

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jul-Oct 2022

(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL22BTS4533690968

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
POKALA SHARVANI
for successfully completing the course

Maternal Infant Young Child Nutrition

with a consolidated score of **73** %

Online Assignments	23.85/25	Proctored Exam	48.75/75
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Total number of candidates certified in this course: 1212

Jan-Apr 2023
(12 week course)

Prof. Sridhar Iyer
Head CDGEP & NPTEL Coordinator
IIT Bombay



Indian Institute of Technology Bombay



Roll No: NPTEL23BT01553755328

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
POKALA SHARVANI
for successfully completing the course



Conservation Economics

with a consolidated score of **76** %

Online Assignments	23.44/25	Proctored Exam	52.5/75
--------------------	----------	----------------	---------

Total number of candidates certified in this course: 306

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Apr 2023
(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL238T28563756703

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
POKALA SHARVANI
for successfully completing the course

Conservation Geography

with a consolidated score of **88** %

Online Assignments	21.85/25	Proctored Exam	66/75
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Total number of candidates certified in this course: **1028**

Pathish

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jul-Oct 2022
(12 week course)

Satyaki

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL22BT54533692415

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

POKALA SHARVANI

for successfully completing the course

Current Regulatory Requirements for Conducting Clinical Trials in India for Investigational New Drugs/New Drug (Version 3.0)

with a consolidated score of **66** %

Online Assignments	17.08/25	Proctored Exam	48.75/75
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Total number of candidates certified in this course: **306**

Prof. Sucheta Banerjee Kurundkar
Director Training,
CDSA

Jul-Sep 2022

(8 week course)

Prof. Andrew Thangaraj
NPTEL Coordinator
IIT Madras



CDSA Clinical Development Services Agency



Roll No: NPTEL22GE25523011749

To validate the certificate



No. of credits recommended: 2 or 3



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
POKALA SHARVANI
for successfully completing the course

Technologies for Clean and Renewable Energy Production

with a consolidated score of **60** %

Online Assignments	17.04/25	Proctored Exam	43.19/75
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Total number of candidates certified in this course: **371**

Prof. Sanjeev Manhas
Coordinator, Continuing Education Centre
IIT Roorkee

Jul-Sep 2022
(8 week course)

Prof. Preeti Maheshwari
NPTEL Coordinator
IIT Roorkee



Indian Institute of Technology Roorkee



Roll No: NPTEL22CH38513010804

To validate the certificate



No. of credits recommended: 2 or 3



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
BANALLA SHREYA
for successfully completing the course



Conservation Economics

with a consolidated score of **85** %

Online Assignments	21.88/25	Proctored Exam	63/75
--------------------	----------	----------------	-------

Total number of candidates certified in this course: 306

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Apr 2023
(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL23BT28S537S0516

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
BANALLA SHREYA
for successfully completing the course



Forests and their Management

with a consolidated score of **78** %

Online Assignments	22.81/25	Proctored Exam	55.5/75
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Total number of candidates certified in this course: 4916

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Apr 2023
(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL23BT29563751539

To validate the certificate



No. of credits recommended: 3 or 4



NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
BANALLA SHREYA
for successfully completing the course

Technologies for Clean and Renewable Energy Production

with a consolidated score of **55** %

Online Assignments	18.75/25	Proctored Exam	36.74/75
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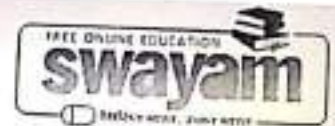
Total number of candidates certified in this course: **371**

Prof. Sanjeev Manhas
Coordinator, Continuing Education Centre
IIT Roorkee

Jul-Sep 2022
(8 week course)

Prof. Priti Maheshwari
NPTEL Coordinator
IIT Roorkee

Indian Institute of Technology Roorkee



TEL: 22CH8523011823

To validate the certificate



No. of credits recommended: 2 or 3



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
BANALLA SHREYA
for successfully completing the course



Wildlife Ecology

with a consolidated score of **82** %

Online Assignments	25/25	Proctored Exam	57/75
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Total number of candidates certified in this course: **3438**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jul-Oct 2022

(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL22BT55S43695707

To validate the certificate



No. of credits recommended: 3 or more



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
BANALLA SHREYA
for successfully completing the course

Conservation Geography

with a consolidated score of **71** %

Online Assignments	19.97/25	Proctored Exam	51/75
--------------------	----------	----------------	-------

Total number of candidates certified in this course: **1028**

Pathish

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jul-Oct 2022

(12 week course)

Satyaki Roy

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL22BT54S33694461

To validate the certificate



No. of credits recommended: 3 or 4



NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

BANALLA SHREYA

for successfully completing the course

Drug Delivery: Principles and Engineering

with a consolidated score of **47** %

Online Assignments	16.53/25	Proctored Exam	30/75
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Total number of candidates certified in this course: 206

Prof. G. L. Sivakumar Babu
Chairman, Center for Continuing Education
IISc Bangalore

Jul-Oct 2022

(12 week course)

Prof. L. Umanand
NPTEL Coordinator
IISc Bangalore



Indian Institute of Science Bangalore



Roll No: NPTEL22BT41S53692744

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

BANALLA SHREYA

for successfully completing the course

Current Regulatory Requirements for Conducting Clinical Trials in India for Investigational New Drugs/New Drug (Version 3.0)

with a consolidated score of **61** %

Online Assignments	20/25	Proctored Exam	40.5/75
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Total number of candidates certified in this course: **306**

Prof. Sucheta Banerjee Kurundkar
Director Training,
CDSA

Jul-Sep 2022

(8 week course)

Prof. Andrew Thangaraj
NPTEL, Coordinator
IIT Madras



CDSA Clinical Development Services Agency



Roll No: NPTEL22GE25513010783

To validate the certificate



No. of credits recommended: 2 or 3



NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
SPOORTHI SADA
for successfully completing the course
Conservation Geography



with a consolidated score of **85** %

Online Assignments	21.56/25	Proctored Exam	63/75
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Total number of candidates certified in this course: 873

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jul-Oct 2023
(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL/CABT/543/2023/402121

To verify and certify:



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

SPOORTHI SADA

for successfully completing the course

Wildlife Ecology



with a consolidated score of **80** %

Online Assignments	24.69/25	Proctored Exam	55.5/75
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Total number of candidates certified in this course: **13415**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jul-Oct 2023

(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



No. NPTEL23B T659637408996

To verify the certificate



No. of credits recommended: 3 or 4

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

SPOORTHI SADA

for successfully completing the course

Genome Editing and Engineering

with a consolidated score of **58** %

Online Assignments	20.81/25	Proctored Exam	37.5/75
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Total number of candidates certified in this course: **217**

Jul-Oct 2022

(12 week course)



Prof. T. V. Bharat

Head, Centre for Educational Technology
NPTEL Coordinator: IIT Guwahati



Indian Institute of Technology Guwahati





NPT-EL Online Certification

(FINANCED BY THE MIN. GOVT. OF INDIA)



This certificate is awarded to
SPOORTHI SADA
for successfully completing the course

Enzyme Sciences and Technology

with a consolidated score of **51** %

Online Assignments	12.72/25	Proctored Exam	38.25/75
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total number of candidates certified in this course: **232**

Jan-Apr 2023
(12 week course)


Prof. L.V. Bharat
Head, Centre for Educational Technology
NPT-EL Directorate, IIT Guwahati



Indian Institute of Technology Guwahati



Roll No.: NPT-EL23BT05533754414

To validate this certificate



No. of credits recommended: 3 or 4



NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
SPOORTHI SADA
for successfully completing the course

Bioreactors

with a consolidated score of **47** %

Online Assignments	11.83/25	Proctored Exam	35/75
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Total number of candidates certified in this course: **152**

Devendra Jalihal
Prof. Devendra Jalihal
Chairperson,
for Outreach and Digital Education (ITM)

Jul-Aug 2023
(4 week course)

Andrew Thangaraj
Prof. Andrew Thangaraj
NPTEL Coordinator
IIT Madras

Indian Institute of Technology Madras





Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
ANIRUDDHA SREERAM BOBBILI
for successfully completing the course



Conservation Geography

with a consolidated score of **97** %

Online Assignments	23.41/25	Proctored Exam	73.5/75
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Total number of candidates certified in this course: 1028

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jul-Oct 2022

(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL22BT54S43691442

To validate the certificate



No. of credits recommended: 3 or 4

Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
ANIRUDDHA SREERAM BOBBILI
for successfully completing the course



Conservation Economics

with a consolidated score of **97** %

Online Assignments	23.75/25	Proctored Exam	73.5/75
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Total number of candidates certified in this course: **306**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Apr 2023
(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL23BT28563751368

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
ANIRUDDHA SREERAM BOBBILI
for successfully completing the course

Enzyme Sciences and Technology

with a consolidated score of **60** %

Online Assignments	20.35/25	Proctored Exam	39.75/75
--------------------	----------	----------------	----------

Total number of candidates certified in this course: 232

Jan-Apr 2023
(12 week course)

Prof. T. V. Bharat
Head, Centre for Educational Technology
NPTEL Coordinator, IIT Guwahati



Indian Institute of Technology Guwahati



Roll No: NPTEL23BT05S43755360

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
ANIRUDDHA SREERAM BOBBILI
for successfully completing the course



Maternal Infant Young Child Nutrition

with a consolidated score of **91** %

Online Assignments	24.56/25	Proctored Exam	66/75
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Total number of candidates certified in this course: 1212

Jan-Apr 2023
(12 week course)

Prof. Sridhar Iyer
Head CDEEP & NPTEL Coordinator
IIT Bombay



Indian Institute of Technology Bombay



Roll No: NPTEL238T01553750116

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
BADHE NITIN RATNAM
for successfully completing the course

Nanotechnology in Agriculture

with a consolidated score of **63** %

Online Assignments	21.25/25	Proctored Exam	42/75
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Total number of candidates certified in this course: **1015**

Ratish

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Mar 2023

(8 week course)

Satyaki

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL23BT30534722162

To validate the certificate



No. of credits recommended: 2 or 3



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
BADHE NITIN RATNAM
for successfully completing the course



Forests and their Management

with a consolidated score of **84** %

Online Assignments	22.81/25	Proctored Exam	61.5/75
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Total number of candidates certified in this course: 4916

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Apr 2023

(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL23BT29S63756152

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MHRD, Govt. of India)



This certificate is awarded to
BADHE NITIN RATNAM
for successfully completing the course

Technologies for Clean and Renewable Energy Production

with a consolidated score of **63** %

Online Assignments	21.21/25	Proctored Exam	41.33/75
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Total number of candidates certified in this course: 371

Fam

Prof. Sanjeev Manias
Coordinator, Continuing Education Centre
IIT Patna

Jul-Sep 2022
(8 week course)

Prati Maheshwari
Prof. Prati Maheshwari
NPTEL Coordinator
IIT Patna



Indian Institute of Technology Patna



Roll No: NPTEL22CH8523011822

To validate the certificate



No. of credits recommended: 2 or 3



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

BADHE NITIN RATNAM

for successfully completing the course

**Current Regulatory Requirements for Conducting Clinical Trials in
India for Investigational New Drugs/New Drug (Version 3.0)**

with a consolidated score of **65** %

Online Assignments	19.58/25	Proctored Exam	45.75/75
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Total number of candidates certified in this course: 306

Prof. Sucheta Banerjee Kurundkar
Director Training,
CDSA

Jul-Sep 2022
(8 week course)

Prof. Andrew Thangaraj
NPTEL, Coordinator
IT Madras



CDSA Clinical Development Services Agency



Roll No: NPTEL22GE25513010780

To validate the certificate



No. of credits recommended: 2 or 3



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

BADHE NITIN RATNAM

for successfully completing the course



Conservation Geography

with a consolidated score of **91** %

Online Assignments	23.44/25	Proctored Exam	67.5/75
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Total number of candidates certified in this course: 1028

B. V. Ratish

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jul-Oct 2022

(12 week course)

Satyaki Roy

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL22BT54533692413

To validate the certificate



No. of credits recommended: 3 or 4



NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
BADHE NITIN RATNAM
for successfully completing the course

Drug Delivery: Principles and Engineering

with a consolidated score of **41** %

Online Assignments	11.44/25	Proctored Exam	30/75
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Total number of candidates certified in this course: 206

Prof. G. L. Sivakumar Babu
Chairman, Center for Continuing Education
IISc Bangalore

Jul-Oct 2022

(12 week course)

Prof. L. Umanand
NPTEL Coordinator
IISc Bangalore



Indian Institute of Science Bangalore



Roll No: NPTEL22BT41553692743

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

K CHETAN BABU

for successfully completing the course

Nanotechnology in Agriculture

with a consolidated score of **60** %

Online Assignments	22.08/25	Proctored Exam	37.5/75
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Total number of candidates certified in this course: **1015**

Pathish

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Mar 2023
(8 week course)

Satyaki Roy

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL23BTE0S44725472

To validate the certificate



No. of credits recommended: 2 or 3



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
K CHETAN BABU
for successfully completing the course



Conservation Economics

with a consolidated score of **96** %

Online Assignments	23.75/25	Proctored Exam	72/75
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Total number of candidates certified in this course: 306

Pathish

Prof. B. V. Pathish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Apr 2023
(12 week course)

Satyaki Roy

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur





Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
K CHETAN BABU
for successfully completing the course



Forests and their Management

with a consolidated score of **90** %

Online Assignments	23.13/25	Proctored Exam	67/75
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Total number of candidates certified in this course: **4916**

Pathish

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Apr 2023
(12 week course)

Satyaki Roy

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur





Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

K CHETAN BABU

for successfully completing the course

**Current Regulatory Requirements for Conducting Clinical Trials in
India for Investigational New Drugs/New Drug (Version 3.0)**

with a consolidated score of **65** %

Online Assignments	20.42/25	Proctored Exam	45/75
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Total number of candidates certified in this course: 306

Prof. Sucheta Banerjee Kurundkar
Director Training,
CDSA

Jul-Sep 2022
(8 week course)

Prof. Andrew Thangaraj
NPTEL, Coordinator
IIT Madras



CDSA Clinical Development Services Agency



Elite



NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
K CHETAN BABU
for successfully completing the course



Technologies for Clean and Renewable Energy Production

with a consolidated score of **75** %

Online Assignments	23.71/25	Proctored Exam	51/75
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Total number of candidates certified in this course: 371

Prof. Sanjeev Manhas
Coordinator, Continuing Education Centre
IIT Roorkee

Jul-Sep 2022
(8 week course)

Prof. Priti Maheshwari
NPTEL Coordinator
IIT Roorkee



Indian Institute of Technology Roorkee





Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
K CHETAN BABU
for successfully completing the course



Conservation Geography

with a consolidated score of **98** %

Online Assignments	23.13/25	Proctored Exam	75/75
--------------------	----------	----------------	-------

Total number of candidates certified in this course: **1028**

Ratish

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jul-Oct 2022
(12 week course)

Satyaki

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur





Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
PHALGUNI
for successfully completing the course



Wildlife Ecology

with a consolidated score of **79** %

Online Assignments	22.19/25	Proctored Exam	57/75
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Total number of candidates certified in this course: **3438**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jul-Oct 2022

(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL22BT55533690644

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
PHALGUNI
for successfully completing the course



Forests and their Management

with a consolidated score of **80** %

Online Assignments	21.56/25	Proctored Exam	58.5/75
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Total number of candidates certified in this course: **4916**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Apr 2023

(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL23BT29S63751870

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
PHALGUNI
for successfully completing the course

Maternal Infant Young Child Nutrition

with a consolidated score of **67** %

Online Assignments	12.38/25	Proctored Exam	54.75/75
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Total number of candidates certified in this course: **1212**

Jan-Apr 2023
(12 week course)

Prof. Sridhar Iyer
Head CDEEP & NPTEL Coordinator
IIT Bombay



Indian Institute of Technology Bombay



Roll No: NPTEL23BT01553750944

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
KOUSHIK GILKAPALLY
for successfully completing the course



Wildlife Ecology

with a consolidated score of **95** %

Online Assignments	24.69/25	Proctored Exam	70.5/75
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Total number of candidates certified in this course: **3438**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jul-Oct 2022

(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL22BT55533690850

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
MANIKONDA RAHUL
for successfully completing the course



Forests and their Management

with a consolidated score of **88** %

Online Assignments	23.75/25	Proctored Exam	64.5/75
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Total number of candidates certified in this course: **4916**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Apr 2023

(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL23BT29553757243

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
KOUSHIK GILKAPALLY
for successfully completing the course



Forests and their Management

with a consolidated score of **100** %

Online Assignments	24.69/25	Proctored Exam	75/75
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Total number of candidates certified in this course: **4916**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Apr 2023

(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL23BT29553754343

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
PUNREDDY AKSHITHA
for successfully completing the course

Bioengineering: An Interface with Biology and Medicine

with a consolidated score of **61** %

Online Assignments	18.96/25	Proctored Exam	42/75
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Total number of candidates certified in this course: **213**

Jan-Mar 2023
(8 week course)


Prof. Sridhar Iyer
Head CDEEP & NPTEL Coordinator
IIT Bombay



Indian Institute of Technology Bombay



Roll No: NPTEL23BT19534724589

To validate the certificate



No. of credits recommended: 2 or 3



Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:3

An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.



NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

KANDIMALA VENKAT KEERTHAN

for successfully completing the course

Biomass Conversion and Biorefinery

with a consolidated score of **55** %

Online Assignments	23.75/25	Proctored Exam	30.75/75
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Total number of candidates certified in this course: **94**

Jan-Apr 2022
(12 week course)

Prof. Hemant B Kaushik
Head, Center for Educational Technology
NPTEL Coordinator, IIT Guwahati



Indian Institute of Technology Guwahati



Roll No: NPTEL22CH28S13533685

To validate and check scores: <https://npTEL.ac.in/nc>



NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
MADAMANCHI LAKSHMI PRASANNA SAI
for successfully completing the course

Biomechanics of Joints and Orthopaedic Implants

with a consolidated score of **58** %

Online Assignments	21.71/25	Proctored Exam	36/75
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Total number of candidates certified in this course: **164**

Aug-Oct 2022
(8 week course)


Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur



Indian Institute of Technology Kharagpur



Roll No: NPTEL22ME126553692921

To validate the certificate



No. of credits recommended: 2 or 3



NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
LOKAM PRANAVI
for successfully completing the course

Biomechanics of Joints and Orthopaedic Implants

with a consolidated score of **50** %

Online Assignments	15.17/25	Proctored Exam	34.5/75
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Total number of candidates certified in this course: **164**

Aug-Oct 2022
(8 week course)


Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur



Indian Institute of Technology Kharagpur



Roll No: NPTEL22ME126S63695051

To validate the certificate



No. of credits recommended: 2 or 3



NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
DHRUV TADIKONDA
for successfully completing the course

Bioreactors

with a consolidated score of **50** %

Online Assignments	14.58/25	Proctored Exam	35.25/75
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Total number of candidates certified in this course: **143**

Prof. Devendra Jalihal
Chairperson,
Centre for Outreach and Digital Education, IITM

Jul-Aug 2022
(4 week course)

Prof. Andrew Thangaraj
NPTEL, Coordinator
IIT Madras



Indian Institute of Technology Madras



Roll No: NPTEL22BT49523015529

To validate the certificate



No. of credits recommended: 1 or 2



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
BIKKUMALLA SHRUTI
for successfully completing the course



Conservation Economics

with a consolidated score of **75** %

Online Assignments	18.75/25	Proctored Exam	56.5/75
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Total number of candidates certified in this course: **306**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Apr 2023

(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL23BT28553750917

To validate the certificate



No. of credits recommended: 3 or 4



NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
MADAMANCHI LAKSHMI PRASANNA SAI
for successfully completing the course

Conservation Economics

with a consolidated score of **55** %

Online Assignments	15.94/25	Proctored Exam	39/75
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Total number of candidates certified in this course: **306**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Apr 2023
(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL23BT28553752954

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
MADAMANCHI LAKSHMI PRASANNA SAI
for successfully completing the course



Conservation Geography

with a consolidated score of **82** %

Online Assignments	22.47/25	Proctored Exam	60/75
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Total number of candidates certified in this course: **1028**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jul-Oct 2022

(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL22BT54S43695451

To validate the certificate



No. of credits recommended: 3 or 4



NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
BIKKUMALLA SHRUTI
for successfully completing the course

Ecology and Environment

with a consolidated score of **52** %

Online Assignments	17.92/25	Proctored Exam	34.5/75
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Total number of candidates certified in this course: **742**

Prof. Devendra Jalihal
Chairperson,
Centre for Outreach and Digital Education, IITM

Aug-Oct 2022
(8 week course)

Prof. Andrew Thangaraj
NPTEL, Coordinator
IIT Madras



Indian Institute of Technology Madras



Roll No: NPTEL22GE20S43691539

To validate the certificate



No. of credits recommended: 2 or 3



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
PUNREDDY AKSHITHA
for successfully completing the course



Ecology and Environment

with a consolidated score of **75** %

Online Assignments	22.5/25	Proctored Exam	52.5/75
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Total number of candidates certified in this course: **742**

Devendra Jalihal

Prof. Devendra Jalihal
Chairperson,
Centre for Outreach and Digital Education, IITM

Aug-Oct 2022
(8 week course)

Andrew Thangaraj

Prof. Andrew Thangaraj
NPTEL, Coordinator
IIT Madras



Indian Institute of Technology Madras



Roll No: NPTEL22GE20S43691876

To validate the certificate



No. of credits recommended: 2 or 3



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
BIKKUMALLA SHRUTI
for successfully completing the course



Forests and their Management

with a consolidated score of **85** %

Online Assignments	23.75/25	Proctored Exam	61.5/75
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Total number of candidates certified in this course: **4916**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Apr 2023

(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL23BT29S63751707

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
CAMBAMPATY AKSHITA NAIDU
for successfully completing the course



Forests and their Management

with a consolidated score of **93** %

Online Assignments	17.5/25	Proctored Exam	75/75
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Total number of candidates certified in this course: **4916**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Apr 2023

(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL23BT29553754108

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
PHALGUNI
for successfully completing the course



Forests and their Management

with a consolidated score of **80** %

Online Assignments	21.56/25	Proctored Exam	58.5/75
--------------------	----------	----------------	---------

Total number of candidates certified in this course: **4916**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Apr 2023
(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL23BT29S63751870

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
MADAMANCHI LAKSHMI PRASANNA SAI
for successfully completing the course

Forests and their Management

with a consolidated score of **62** %

Online Assignments	16.88/25	Proctored Exam	45/75
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Total number of candidates certified in this course: **4916**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Apr 2023

(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL23BT29S63753854

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
KANDIMALA VENKAT KEERTHAN
for successfully completing the course



Forests and their Management

with a consolidated score of **100 %**

Online Assignments	25/25	Proctored Exam	75/75
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Total number of candidates certified in this course: **4916**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Apr 2023

(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL23BT29S63756658

To validate the certificate



No. of credits recommended: 3 or 4



NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
DHRUV TADIKONDA
for successfully completing the course

Forests and their Management

with a consolidated score of **53** %

Online Assignments	23.44/25	Proctored Exam	30/75
--------------------	----------	----------------	-------

Total number of candidates certified in this course: **4916**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Apr 2023
(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL23BT29553754233

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
PHALGUNI
for successfully completing the course



Forests and their Management

with a consolidated score of **80** %

Online Assignments	21.56/25	Proctored Exam	58.5/75
--------------------	----------	----------------	---------

Total number of candidates certified in this course: **4916**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Apr 2023

(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL23BT29S63751870

To validate the certificate



No. of credits recommended: 3 or 4



NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
REKHAM POOJITHA
for successfully completing the course

Biomechanics of Joints and Orthopaedic Implants

with a consolidated score of **44** %

Online Assignments	13.79/25	Proctored Exam	30/75
--------------------	----------	----------------	-------

Total number of candidates certified in this course: **164**

Aug-Oct 2022
(8 week course)


Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur



Indian Institute of Technology Kharagpur



Roll No: NPTEL22ME126S53694281

To validate the certificate



No. of credits recommended: 2 or 3



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
PHALGUNI
for successfully completing the course

Maternal Infant Young Child Nutrition

with a consolidated score of **67** %

Online Assignments	12.38/25	Proctored Exam	54.75/75
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Total number of candidates certified in this course: **1212**

Jan-Apr 2023
(12 week course)

Prof. Sridhar Iyer
Head CDEEP & NPTEL Coordinator
IIT Bombay



Indian Institute of Technology Bombay



Roll No: NPTEL23BT01553750944

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
KANDIMALA VENKAT KEERTHAN
for successfully completing the course



Maternal Infant Young Child Nutrition

with a consolidated score of **91** %

Online Assignments	21.56/25	Proctored Exam	69.75/75
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Total number of candidates certified in this course: **1212**

Jan-Apr 2023
(12 week course)

Prof. Sridhar Iyer
Head CDEEP & NPTEL Coordinator
IIT Bombay



Indian Institute of Technology Bombay



Roll No: NPTEL23BT01553755758

To validate the certificate



No. of credits recommended: 3 or 4



NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
PUNREDDY AKSHITHA
for successfully completing the course

Medical Biomaterials

with a consolidated score of **58** %

Online Assignments	18.25/25	Proctored Exam	39.52/75
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Total number of candidates certified in this course: **152**

Prof. Devendra Jalihal
Chairperson,
Centre for Outreach and Digital Education, IITM

Feb-Apr 2023
(8 week course)

Prof. Andrew Thangaraj
NPTEL, Coordinator
IIT Madras



Indian Institute of Technology Madras



Roll No: NPTEL23BT17553750749

To validate the certificate



No. of credits recommended: 2 or 3



NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
DHRUV TADIKONDA
for successfully completing the course

Nanotechnology in Agriculture

with a consolidated score of **53** %

Online Assignments	22.5/25	Proctored Exam	30/75
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Total number of candidates certified in this course: **1015**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Mar 2023
(8 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL23BT30S34724591

To validate the certificate



No. of credits recommended: 2 or 3



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
PUNREDDY AKSHITHA
for successfully completing the course

Nanotechnology in Agriculture

with a consolidated score of **68** %

Online Assignments	22.92/25	Proctored Exam	45/75
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Total number of candidates certified in this course: **1015**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Mar 2023

(8 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL23BT30S44725486

To validate the certificate



No. of credits recommended: 2 or 3



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
REKHAM POOJITHA
for successfully completing the course



Conservation Economics

with a consolidated score of **81** %

Online Assignments	11.56/25	Proctored Exam	69/75
--------------------	----------	----------------	-------

Total number of candidates certified in this course: **306**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Apr 2023

(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL23BT28S63756711

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
REKHAM POOJITHA
for successfully completing the course



Forests and their Management

with a consolidated score of **82** %

Online Assignments	14.06/25	Proctored Exam	67.5/75
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Total number of candidates certified in this course: **4916**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Apr 2023

(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL23BT29553755806

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
MUSKAN
for successfully completing the course

Maternal Infant Young Child Nutrition

with a consolidated score of **71** %

Online Assignments	14.03/25	Proctored Exam	57/75
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Total number of candidates certified in this course: **1212**

Jan-Apr 2023
(12 week course)

Prof. Sridhar Iyer
Head CDEEP & NPTEL Coordinator
IIT Bombay



Indian Institute of Technology Bombay



Roll No: NPTEL23BT01553757674

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
GUTHIKONDA SAI PRASHANTH
for successfully completing the course



Wildlife Ecology

with a consolidated score of **91** %

Online Assignments	24.69/25	Proctored Exam	66/75
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Total number of candidates certified in this course: **3438**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jul-Oct 2022

(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL22BT55533690919

To validate the certificate



No. of credits recommended: 3 or 4



NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
DANNE SHAMITHA
for successfully completing the course

Wildlife Ecology

with a consolidated score of **47** %

Online Assignments	15.06/25	Proctored Exam	31.5/75
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Total number of candidates certified in this course: **3438**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jul-Oct 2022
(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL22BT55533692240

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
MANIKONDA RAHUL
for successfully completing the course



Wildlife Ecology

with a consolidated score of **76** %

Online Assignments	25/25	Proctored Exam	51/75
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Total number of candidates certified in this course: **3438**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jul-Oct 2022

(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL22BT55533692115

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
GADDA THABITHA
for successfully completing the course



Wildlife Ecology

with a consolidated score of **83** %

Online Assignments	21.22/25	Proctored Exam	61.5/75
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Total number of candidates certified in this course: **3438**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jul-Oct 2022

(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL22BT55543693264

To validate the certificate



No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
KANDIMALA VENKAT KEERTHAN
for successfully completing the course



Wildlife Ecology

with a consolidated score of **99** %

Online Assignments	25/25	Proctored Exam	73.5/75
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Total number of candidates certified in this course: **3438**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jul-Oct 2022

(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL22BT55533694848

To validate the certificate



No. of credits recommended: 3 or 4



NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
ROSHINI PERUMAL
for successfully completing the course

Enzyme Sciences and Technology

with a consolidated score of **53** %

Online Assignments	11.31/25	Proctored Exam	42/75
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Total number of candidates certified in this course: 232

Jan-Apr 2023
(12 week course)


Prof. T. V. Bharat
Head, Centre for Educational Technology
NPTEL Coordinator, IIT Guwahati



Indian Institute of Technology Guwahati



Roll No. NPTEL23BT05543759535

To validate the certificate



No. of credits recommended: 3 or 4



NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

NIDHI BHIDE

for successfully completing the course

Drug Delivery: Principles and Engineering

with a consolidated score of **49** %

Online Assignments	18.94/25	Proctored Exam	30/75
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Total number of candidates certified in this course: **337**

Prof. G. L. Sivakumar Babu
Chairman, Center for Continuing Education
IISc Bangalore

Jul-Oct 2023

(12 week course)

Prof. L. Umanand
NPTEL Coordinator
IISc Bangalore



Indian Institute of Science Bangalore



Roll No: NPTEL23BT37S737400780

To verify the certificate

No. of credits recommended: 3 or 4



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
CAMBAMPATY AKSHITA NAIDU
for successfully completing the course



Wildlife Ecology

with a consolidated score of **88** %

Online Assignments	22.19/25	Proctored Exam	66/75
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Total number of candidates certified in this course: **3438**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jul-Oct 2022
(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur





NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

LOKAM PRANAVI

for successfully completing the course

Patent Law for Engineers and Scientists

with a consolidated score of ⁴² %

Online Assignments	^{10/25}	Proctored Exam	^{31.5/75}
			₂₆₈

Total number of candidates certified in this course:

Devendra Jalihal

Prof. Devendra Jalihal

Chairperson,

Centre for Outreach and Digital Education, IITM

Jul-Oct 2023

(12 week course)

Andrew Thangaraj

Prof. Andrew Thangaraj

NPTEL, Coordinator

IIT Madras



Indian Institute of Technology Madras

Roll No. NPTEL23HS97S537406962

To verify the certificate



No. of credits recommended: 3-4 शिक्षित भारत, उन्नत भारत



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

NIDHI BHIDE

for successfully completing the course

Wildlife Ecology

with a consolidated score of **75** %

Online Assignments	21.25/25	Proctored Exam	53.5/75
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Total number of candidates certified in this course: **13415**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur



Indian Institute of Technology Kanpur



Roll No: NPTEL23BT55S537400755

To verify the certificate

No. of credits recommended: 3 or 4

Department of Biotechnology

1.3 Curriculum Enrichment 2022-23

**List of value added courses completed by BTech Biotechnology students during
2022-23**

INDEX

S. No	Title of the course	Code	Duration of the course	No. of students completed the course
1	A 5-Day Value added course on Basic Techniques in Biotechnology during 28th November to 2nd December 2022	NA	30hours	25
2	Maternal Infant Young Child Nutrition	CBIT/22BTV045	12 weeks	7
3	Forest and their management	CBIT/22BTV017	12 weeks	12
4	Wildlife Ecology	CBIT/22 BTV026	12 WEEKS	12
5	Biomechanics of joints and Orthopaedic implants	CBIT/22BTV035	8 weeks	5
6	Conservation Economics	CBIT/22BTV016	12 weeks	10
7	Conservation geography	CBIT/22BTV056	12 WEEKS	10
8	Drug Delivery:Principles and Engineering	CBIT/22BTV033	12 WEEKS	4
9	Enzyme sciences and technology	CBIT/22BTV058	12 WEEKS	5
10	Ecology and Environment	CBIT/22BTV027	8 WEEKS	2
11	Nanotechnology in Agriculture	CBIT/22BTV051	8 WEEKS	6
12	Bioengineering: An Interface with Biology and Medicine	CBIT/22BTV059	8 WEEKS	1
13	Medical Biomaterials	CBIT/22BTV060	12	1
14	Bioreactors	CBIT/22BTV61	8 WEEKS	2
15	Technology for clean and renewable energy production	CBIT/BTV041	8 WEEKS	5
16	Current regulatory requirements for conducting clinical trials in india for investigational New Drugs ver.3.0	CBIT/BTV057	8 WEEKS	5
17	Human molecular genetics	CBIT/22BT V047	4 WEEKS	1

18	Genome editing and engineering	CBIT/22BTV0 62	12 WEEKS	1
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Y. Lakshmi
Asst. Prof.
Dept. of Bio-Technology
College of Engineering, Anna University
Guindy, Chennai-600 075.

TITLE OF THE VALUE-ADDED COURSE:

**A 5-Day Value added course on Basic Techniques in Biotechnology during 28th
November to 2nd December 2022**

**No. of enrolled Participants- 25
Duration of the Course: 30hours**

ACADEMIC YEAR:2022-23

(Syllabus)

Department of Biotechnology CBIT(A)

Value Added Course

A 5-Day Value added course on Basic Techniques in Biotechnology

Syllabus : Workshop

Date	Day		FN Session		AN Session
28.11.2022	Day 1	09:15 am - 10:15 am	Welcome Speech addressing the participants of the workshop Division of participants into batches	01:00pm - 04:00pm	Batch 1: Tissue Culture Lab Media preparation
					Batch 2: Bioinformatics Lab Information Retrieval from bibliography database Sequence retrieval from DNA & Protein Database
29.11.2022	Day 2	09:00 am - 12:00 pm	Batch 1: Bioinformatics Lab Information Retrieval from bibliography database Sequence retrieval from DNA & Protein Database	01:00pm - 04:00pm	Batch 1: Tissue Culture Lab Surface Sterilization Callus induction
			Batch 2: Tissue Culture Lab Media preparation		Batch 2: Bioinformatics Lab Sequence similarity searching BLAST tools Sequence alignment- Pairwise & multiple sequence alignment
	12:00pm - 12:30 pm	Ice- Breaker Session			

30.11.2022	Da y3	09:00 am - 12:00 pm	Batch 1: BioinformaticsLab Sequence similarity search using BLAST	01:00pm - 04:00p m	Batch 1: Tissue CultureLab Micropropagation and AntherCulture
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			tools Sequence alignment- Pairwise & multiple sequence alignment		
			Batch 2: Tissue Culture Lab Surface Sterilization Callus induction		Batch 2: Bioinformatics Lab Phylogenetic tree construction Gene Prediction
		12:00 pm	Bioquiz Round 1		
01.12.2022	Day 4	09:10 am - 12:10pm	Batch 1: Bioinformatics Lab Phylogenetic tree construction Gene Prediction	01:00pm - 04:00pm	Batch 1: Tissue Culture Lab Protoplast Isolation(demo) and Synthetic Seeds
			Batch 2: Tissue Culture Lab Micropropagation and Anther Culture		Batch 2: Bioinformatics Lab Working with PDB-RASMOL, PYMOL Primer Designing
		12:00 pm -	Bioquiz Round 2		
02.12.2022	Day 5	09:10 am - 12:10pm	Batch 1: Bioinformatics Lab Working with PDB-RASMOL, PYMOL Primer Designing	01:00 pm- 1:45 PM	Bio hackathon
					01:45 pm - 3:30 pm
			Batch 2: Tissue Culture Lab Protoplast Isolation(demo) and Synthetic Seeds	03:30 pm - 04:20 pm	Valedictory speech Announcement of winners Photo Session

List of students enrolled for 30hourvalue added course on “A 5-Day Value added course on “Basic Techniques in Biotechnology”

S.No	Name	Roll No
1	Bhanu Shankar Dhulipalla	160119805041
2	Krushe Mundru	160119805010
3	Vaishnavi mokkapati	160119805033
4	Sai Phani Raj B	160119805052
5	Manisha Reddy Gavini	160119805013
6	Shekkar Ravalika	160119805017
7	Duggi Reddy Navya Sree	160119805016
8	Amulya Adavalli	160119805002
9	KVSSNL Mounika	160119805024
10	Aishwarya CVS	160119805001
11	M Sai Sahithi	160119805021
12	Chikitha	160119805005
13	Caleb Joel Raj	160119805042
14	Jeremiah Paul Gorremuchu	160119805046
15	Sri Harshini	160119805030
16	Anushka Bera	160119805003
17	Bellapurla Mary Karen	160119805014
18	Samhitha Cheruku	160119805022
19	Valluru Saileela Sirisha	160120805019
20	Jyothika Meenakshi Kambhampati	160120805013
21	Punna Vaishnavi	160119805034
22	V Shreya Sharma	160120805037
23	Shivani Hazari	160119805026
24	Chunduru Sai Hari Hara Sudheshna	160120805008
25	N Likhit Sai Phani Chowdary	160119805047


 Y. Logan
 Head, Dept. of Bio-Technology
 Andhra University of Health Sciences
 Guntur, Hyderabad-502 015

TITLE OF THE VALUE-ADDED COURSE:

Course code :CBIT/22BTV045

Maternal Infant Young Child Nutrition

No. of enrolled Participants- 7

Duration of the Course: 30hours

ACADEMIC YEAR:2022-23

Name of the value-added courses (with 30 or more contact hours) offered	Course code (if any)	Year of offering	No. of times offered during the same year	Duration of course in Hours	Number of students enrolled in the year	Number of Students completing the course in the year
Maternal Infant Young Child Nutrition	CBIT/22BTV045	2022	1	12 WEEKS	7	7

Syllabus

Course code : CBIT/22BTV045

Maternal Infant Young Child Nutrition

Course Duration; 12 Weeks

Credits: 3

Week 1: Maternal Infant Young Child Nutrition - Introduction

Week 2: Science of nutrition

Week 3: Types of malnutrition and hidden hunger

Week 4: Importance of first 1,000 days

Week 5: Science of Breastfeeding

Week 6: Cross cradle hold and 45 points of breastfeeding counselling.

Week 7: Other breastfeeding holds

Week 8: Manual expression, storage and feeding of the expressed breastmilk.

Nipple/Breast conditions

Week 9: New born care and Kangaroo mother care

Week 10: Complementary feeding

Week 11: Maternal Nutrition-pre-pregnancy pregnancy-lactating mothers

Adolescent Nutrition

Week 12: Assessment of anthropometric measurement and growth charts -

Percentile & Z Score

Books and references Who growth charts


Y. Raju
HEAD
Dept. of Bio-Technology
Chaitanya Bharathi Institute of Techno
Gandipet, Hyderabad-500 075.

**List of Students Completed
Maternal Infant Young Child Nutrition**

S.No	Name	Roll no
1	Phalguni nadiger	160118805033
2	Kandimala Venkat Keerthan	160121805054
3	Muskan	160121805030
4	Chunduru Sai Hari Hara Sudheshna	160120805008
5	Neha reddy	160120805021
6	Jyothika Meenakshi Kambhampati	160120805013
7	P shravani	160120805019


Dept. of Bio-Technology
Chaitanya Bharathi Institute of Technology
Gandipet, Hyderabad-500 075

TITLE OF THE VALUE-ADDED COURSE:

Course code : CBIT/22BTV017
Forest and their management No.
of enrolled Participants- 12
Duration of the Course: 12 weeks

ACADEMIC YEAR:2022-23

Forests and Their Management

Course Duration: 12 weeks

Credits: 3

Week 1: Introduction

Week 2: Basics of silviculture

Week 3: Forest soils

Week 4: Forest mensuration

Week 5: Forest surveying

Week 6: Forest protection

Week 7: Silvicultural management - I

Week 8: Silvicultural management - II

Week 9: Logging and yield

Week 10: Silvicultural practices

Week 11: Newer trends in forestry

Week 12: Revision

Books and references

1. Principles and practices of Silviculture by S. S. Bist
2. Forest soils by Wilde


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List of participants
Forest and their management

S. No	Name of the student	Roll No
1	Phalguni nadiger	160121805033
2	Lakshmi Prasanna Sai Madamanchi	160121805024
3	Cambampaty akshita Naidu	160121805008
4	Bikkumalla Shruti	160121805006
5	Gilkapally Koushik	160121805050
6	Dhruv Tadikonda	160121805048
7	B Shreya	160120805021
8	Nithin Badhe	1601208050 41
9	K chethan Babu	1601298050
10	Akshitha	160121805008
11	M Rahul	1601218050
12	Rekham Poojitha	160121805036


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TITLE OF THE VALUE-ADDED COURSE:

Course code :CBIT/22BTV026

WILDLIFE ECOLOGY

No. of enrolled Participants- 12

Duration of the Course: 12 weeks

ACADEMIC YEAR:2022-23

Syllabus

Course code: CBIT/22BTV026

Wildlife Ecology

Duration: 12 weeks

Credits: 3

Prerequisites: Has cleared 10+2 with science

Course layout Week

1: Introduction

Week 2: Ecological structure

Week 3: Ecological interactions

Week 4: Ecological energetics

Week 5: Population Ecology

Week 6: Community Ecology

Week 7: Distribution & abundance

Week 8: Management of threatened species

Week 9: Human Ecology

Week 10: Ecology of change

Week 11: Applied Ecology

Week 12: Revision

Books and references

Krebs, C. J. The experimental analysis of distribution and abundance. Ecology. New York: Harper and Row.2. Odum, E. P., & Barrett, G. W. Fundamentals of Ecology. Philadelphia: Saunders.3. Selected articles / papers as referred to in the lectures.

List of students completed
Wild life ecology

S.No	Name	Roll no
1.	Chunduru Sai Hari Hara Sudheshna	160120805008
2.	Neha reddy	160120805021
3	B Shreya	160201805035
4	Spoorthy soda	160120805036
5	Phalguni nadiger	160121805033
6	Gilkapally Koushik	160121805050


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TITLE OF THE VALUE-ADDED COURSE:

Course code :CBIT/22BTV035

Biomechanics of joints and Orthopaedic implants

No. of enrolled Participants- 3

Duration of the Course: 8 weeks

ACADEMIC YEAR:2022-23

Biomechanics of Joints and Orthopaedic Implants

Duration: 8 weeks

Credits: 2

Prerequisites: Engineering Mechanics, Solid Mechanics

Course layout

Week 1: Introduction Musculoskeletal system Bone, Muscle, Ligament, Tendon, Cartilage and Meniscus – structure and function Anatomy of Synovial Joints – Hip, Knee, Shoulder, Elbow

Week 2: Biomechanics of Human Joints: (a) Hip Joint; (b) Knee Joint; (c) Shoulder Joint; (d) Elbow Joint

Week 3: Biomechanics of Gait cycle Gait Analysis Measurement techniques 3-D Motion analysis system – markers, cameras and force platform Lower extremity – hip musculoskeletal forces

Week 4: Joint Kinematics Principle of Forward and Inverse Dynamics Calculations on joint forces and moments Calculations on muscle forces Model-based estimation of musculoskeletal forces during movements

Week 5: Concepts of Stresses and Strain Bone structure - Cancellous and Cortical Bone Mechanical Behaviour of Bone Bone Adaptation and Viscoelasticity Bone Anisotropy.

Week 6: Biomechanics of Joint Replacement – Hip, Knee, Shoulder, Spine Cemented and Cementless fixation Failure mechanisms of implants Implant Design Considerations

Week 7: Biomechanical modelling techniques and analysis Finite Element Analysis of bone and implant Bone Remodelling – formulation, algorithm, simulation Experimental validation of numerical models

Week 8: Bone Fracture Healing Tissue Differentiation Mechanoregulatory principle Mechanobiology based simulation of bone ingrowth around implants – acetabular and femoral components

Books and references

- (1) "Basic Biomechanics of the Musculoskeletal System" by Margareta Nordin and Victor H. Frankel
- (2) "Biomechanics and Motor Control of Human Movement" by David A. Winter
- (3) "Orthopaedic Biomechanics" by D.L. Bartel, D.T. Davy and T.M. Keaveny

List of students completed
Biomechanics of joints and Orthopaedic implants

S. No	Name	Roll No
1	Rekham Poojitha	160121805036
2	Lakshmi Prasanna Sai Madamanchi	160121805024
3	Lokam Pranavi Sri Sai	160121805023


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TITLE OF THE VALUE-ADDED COURSE:

Course code :CBIT/22BTV016

CONSERVATION ECONOMICS

No. of enrolled Participants- 10

Duration of the Course: 12 weeks

ACADEMIC YEAR:2022-23

Conservation Economics

Course Duration: 12 weeks

Credits: 3

Week 1 What is Economics?

Week 2 What is Conservation?

Week 3 Modern impacts necessitating conservation

Week 4 Threats to wildlife

Week 5 How can Economics help?

Week 6 Markets: Places where Economics works

Week 7 Markets, welfare and conservation

Week 8 Public sector and conservation

Week 9 Industrial organization and conservation

Week 10 Labour market economics and conservation **Week 11**

Practical issues in Economics and Conservation **Week 12** Case Studies

Books and references 1.Economics,

Krugman and Wells2.Economics,

Hubbard & O'Brien

3.Principles of Economics, N. Gregory Mankiw

4.Basic Economics, Thomas Sowell

**List of students completed
Conservation Economics**

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1	Divya prema	160120805008
2	Jyothika Meenakshi Kambhampati	160120805013
3	Neha reddy m	160120805017
4	P Sravani	160120805023
5	B Shreya	160120805027
6	Sb Aniruddha	160120805041
7	Chetan babu	160120805052
8	Lakshmi Prasanna Sai madamanchi	160121805024
9	Rekham poojitha	160121805036
10	Bikkumalla shruti	160121805006


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TITLE OF THE VALUE-ADDED COURSE:

Course code :CBIT/22BTV056

CONSERVATION GEOGRAPPHY

No. of enrolled Participants- 10

Duration of the Course: 12 weeks

ACADEMIC YEAR:2022-23

Conservation Geography

Duration: 12 weeks

Credits: 2

Prerequisites: Nil

Course layout

Week 1: Introduction to Conservation

Geography

Week 2: The Earth

Week 3: Lithosphere and landforms

Week 4: Atmosphere

Week 5: Hydrosphere

Week 6: Physical Geography in the Indian

context **Week 7:** Biosphere

Week 8: Conservation of biodiversity

Week 9: Human population and conservation

Week 10: Resources and conservation

Week 11: Economic Geography and conservation

Week 12: Special topics in Geography and

conservation

Books and references

1. Modern Physical Geography, Strahler & Strahler
2. General Climatology, Howard Critchfield
3. Principles of Geomorphology, William Thornbury
4. RS-GIS with free software, Ankur Awadhya . Earth's Climate: Past andFuture, William F. Ruddiman

**List of students completed
Conservation Geography**

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1	Divya prema	160120805008
2	Jyothika Meenakshi Kambhampati	160120805013
3	Neha reddy m	160120805017
4	P Sravani	160120805023
5	B Shreya	160120805027
6	S Spoorthi	160120805032
7	Sb Aniruddha	160120805041
8	Bahde Nithin R	160120805043
9	Chetan babu	160120805052
10	Lakshmi prasanna sai madamanchi	160121805024


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TITLE OF THE VALUE-ADDED COURSE:

Course code :CBIT/22BTV033

DRUG DELIVERY :PRINCIPLES AND ENGINEERING

No. of enrolled Participants- 4

Duration of the Course: 12 weeks

ACADEMIC YEAR:2022-23

Drug Delivery: Principles and Engineering

Duration: 12 weeks

Credits: 3

Prerequisites: A course in biochemistry, molecular biology, anatomy is recommended

Course layout

Week 1: Pharmacokinetics: Bioavailability, Elimination, Therapeutic index

Week 2: Prodrugs, Controlled release

Week 3: Polymers: Synthesis, properties, characterization, crystallinity and amorphousness

Week 4: Biopolymers: Natural and Synthetic, biocompatibility, Biodegradation, commonly used biopolymers

Week 5: Polymer-Drug conjugates, PEGylation

Week 6: Diffusion controlled systems, Ficks laws, Reservoir systems, non-erodible matrix systems, Bio-erodible systems

Week 7: Hydrogels: Physical or chemical, pore-size calculation, in-situ crosslinking

Week 8: Nano and Micro-particles: Dendrimers, Liposomes, Micelles

Week 9: Metal and polymeric particles, effect of particle shape, charge and elasticity

Week 10: Protein Adsorption and tissue engineering, Drug delivery in tissue engineering

Week 11: Implant associated infections, Route specific delivery: Oral, Subcutaneous, Intramuscular, transdermal, inhalation, intravenous

Week 12: Vaccines, Cancer vaccines, Cell and gene delivery, Smart responsive drug delivery, Targeted drug delivery, Nanotoxicology and market translation

Books and references

1. Drug Delivery: Engineering Principles for Drug Therapy, W. Mark Saltzman, Oxford University Press, 2001

2. Drug Delivery: Fundamentals and Applications, Anya M. Hillery and Kinam Park, 2nd Edition, CRC Press, 2016


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List of students completed
Drug Delivery: Principles and Engineering

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TITLE OF THE VALUE-ADDED COURSE:

Course code :CBIT/22BTV058

ENZYME SCIENCES AND TECHNOLOGY

No. of enrolled Participants- 5

Duration of the Course: 12 weeks

ACADEMIC YEAR:2022-23

Enzyme Sciences and Technology**Duration:** 12 weeks**Credits:** 3**PREREQUISITES: Basic Biochemistry****Week 1:** Introduction to Enzymes

Lecture 1: Introduction

Lecture 2: Classification and Nomenclature of enzymes (Part 1)

Lecture 3: Classification and Nomenclature of enzymes (Part 2)

Week 2: Structure of enzyme

Lecture 4: Enzyme Structure (Part 1)

Lecture 5: Enzyme Structure (Part 2)

Lecture 6: Enzyme Structure (Part 3)

Week 3: Enzyme Production (Part 1)

Lecture 7: Cloning of Enzyme (Part 1)

Lecture 8: Cloning of Enzyme (Part 2)

Lecture 9: Over-expression in Host

Week 4: Enzyme Production (Part 2)

Lecture 10: Extraction of enzyme

Lecture 11: Purification Strategies (Part 1)

Lecture 12: Purification Strategies (Part 2)

Week 5: Enzyme Production (Part 3)

Lecture 13: Purification Strategies (Part 3)

Lecture 14: Purification Strategies (Part 4) Lecture 15:

Enzyme Characterization Approaches

Week 6: Enzyme catalyzed Biochemical reactions

Lecture 16: Enzyme Catalyzed reactions (Part 1: Carbohydrate Metabolism)

Lecture 17: Enzyme Catalyzed reactions (Part 2: Lipid and Protein Metabolism) Lecture 18: Enzyme Catalyzed reactions (Part 3: Detoxification)

Week 7: Enzyme-Substrate interaction

Lecture 19: Enzyme-Substrate interaction (Part 1: Spectroscopic approaches) Lecture

20: Enzyme-Substrate interaction (Part 2: Isothermal Calorimetry) Lecture 21:

Enzyme-Substrate interaction (Part 3: Surface plasma resonance)

Week 8: Enzyme assay system and Kinetics

Lecture 22: Enzyme assay system

Lecture 23: Enzyme Kinetics (Part 1)

Lecture 24: Enzyme Kinetics (Part 2)

Week 9: Enzyme Inhibitor Designing

Lecture 25: Inhibitor designing (Part 1: Traditional approach)

Lecture 26: Inhibitor designing (Part 2: Modern approach)

Lecture 27: Inhibitor designing (Part 3: Computational approaches)

Week 10: Enzyme Inhibition kinetics

Lecture 28: Enzyme Inhibition kinetics (Part 1)

Lecture 29: Enzyme Inhibition kinetics (Part 2)

Lecture 30: Enzyme Inhibition kinetics (Part 3)

Week 11: Enzyme Applications (Part 1)

Lecture 31: Enzymes in Industrial setup (Part 1) Lecture

32: Enzymes in Industrial setup (Part 2) Lecture 33:

Enzymes in catalyzing chemical reactions

Week 12: Enzyme Applications (Part 2)

Lecture 31: Enzymes in medical field Lecture

32: Enzymes in environment field Lecture 33:

Enzymes in drug discover


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List of students completed
Enzyme Sciences and Technology

S. No	Name	Roll No
1	Jyothika Meenakshi Kambhampati	160120805013
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3	S Spoorthi	160120805032
4	Sb Aniruddha	160120805041
5	Roshini perumal	160121805038


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TITLE OF THE VALUE-ADDED COURSE:

Course code :CBIT/22BTV033

ECOLOGY AND ENVIRONMENT

No. of enrolled Participants- 2

Duration of the Course: 8 weeks

ACADEMIC YEAR:2022-23

Ecology and Environment**Duration:** 8 weeks**Credits:** 2**Prerequisites:** Nil**Course layout****Week 1:** Dr. B.S. Murty -Introduction (1), Sustainability Definition / Goals, Climate Change (2), Case Studies (3) (Eg: Dams, Chemicals, e-waste, IOT, Landfill sitingetc)**Week 2:** Dr. Sudhir Chella Rajan-Sustainability and Economics (3), Sustainability and Ethics (3)**Week 3:** Dr. Ligy Philip-(Water Quality/ Waste Management), Water Quality and Treatment (3), Waste Management and Treatment (3)**Week 4:** Dr. B. S. Murty (Water Management/ Resources), Urban Drainage, Water Resource Management, Impact of Climate Change**Week 5:** Dr. Srinivas Jayanti (Energy)-Energy Demand / Resources (1), Pollution from Energy generation (1), Energy and Climate Change (Global Warming) (1), Energy and Sustainability (1), Long Range and Short Range Solutions (1) (Globalvs. India)**Week 6:** Dr. R. Ravi Krishna-Risk Assessment Definition (1), Pollutant Pathways / Safety/ Exposure (1), Liability /Examples (1), Life Cycle Assessment (2), Environmental Management and LCA (1)**Week 7:** Dr. Sudhir Chella Rajan-Urban Planning / Sprawl (1), Challenges in Urban Planning, Transport (1), Energy (Smart Grid) (1), Waste (1), Governance (1)**Week 8:** Dr. Susy Varughese / Dr. Parag Ravindran-Ecology – definitions / Systems (1), Biodiversity (1), Examples of Historical Impact of economy on Ecology, Restoration / Ecological Engineering**Week 9:** Dr. Ligy Philip / Dr. Ravi Krishna -Solid Waste Management, Hazardous Waste Management**Books and references**

Wrap up Emphasis on Climate Change and Adaptation

**List of students completed
Ecology and Environment**

S. No	Name	Roll No
1	Punreddy akshitha	160121805034
2	Bikkumalla shruti	160121805006


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TITLE OF THE VALUE-ADDED COURSE:
Course code :CBIT/22BTV051
NANOTECHNOLOGY IN AGRICULTURE

No. of enrolled Participants- 5
Duration of the Course: 12 weeks

ACADEMIC YEAR:2022-23

Nanotechnology in Agriculture

Course Duration: 8 weeks

Credits: 2

Week 1: History of agriculture and the role of chemicals in modern agriculture

Week 2: Overview of nanotechnology

Week 3: Application of nanotechnology in modern day agriculture practices I

Week 4: Application of nanotechnology in modern day agriculture practices II

Week 5: Application of nanotechnologies in animal production

Week 6: Nanotechnology and shelf life of agricultural and food products

Week 7: Nanotechnologies for water quality and availability

Week 8: Green nanotechnology and the role of good governance and policies for effective nanotechnology development.

Books and references

- E-Reference materials will be provided during the course


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**List of students completed
Nanotechnology in Agriculture**

S. No	Name	Roll No
1	Punreddy akshitha	160121805034
2	Dhruv tadikonda	160121805048
3	Bahde Nithin R	160120805043
4	Chunduru Sai Hari Hara Sudheshna	160120805008
5	Divya prema	160120805008


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TITLE OF THE VALUE-ADDED COURSE:

Course code :CBIT/22BTV059

Bioengineering: An Interface with Biology and Medicine

No. of enrolled Participants-1

Duration of the Course: 8 weeks

ACADEMIC YEAR:2022-23

Bioengineering: An Interface with Biology and Medicine

Course Duration: 8 weeks

Credits: 2

Week 1 : Why biology for engineers: Part-I, Why biology for engineers: Part-II, Life processes & Cell, Cell and its properties, Clinician's Perspective-I

Week 2 : DNA Tools-Gene cloning, DNA Tools-Gene cloning-II, DNA Tools & Biotechnology, DNA Tools & Biotechnology-II,

Week 3 : DNA Tools & Biotechnology-III, DNA Tools & Biotechnology-IV, DNA Tools & Biotechnology-V, DNA Tools & Biotechnology-VI, Clinician's Perspective-III

Week 4 : Genetics-I, Genetics-II, Genetics-III, Genetics-IV, Clinician's Perspective-IV

Week 5 : Chromosomal basis of inheritance, Linkage, chromosomal disorders, Classical Genetics experiments, Bacteria and Viruses, Clinician's Perspective-V

Week 6 : Cell cycle, Cell cycle disregulation & Cancer, Developmental Biology, Principles and application of Animal Cloning, Evolution & Bioinformatics

Week 7 : Amino acids & proteins, Proteins & Proteomics, Techniques to Study Protein & Proteome-I,II,III

Week 8 : Techniques to Study Protein & Proteome-IV, Protein Interactions & Microarrays, Protein interactions & Systems biology, Bioinformatics, Ethics in Research and Publications


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List of students completed
Bioengineering: An Interface with Biology and Medicine

S. No	Name	Roll No
1	Punreddy akshitha	160121805034


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TITLE OF THE VALUE-ADDED COURSE:

Course code :**CBIT/22BTV060**

MEDICAL BIOMATERIALS

No. of enrolled Participants-1

Duration of the Course: 12 weeks

ACADEMIC YEAR:2022-23

Medical Biomaterials

Course Duration: 8 weeks

Credits: 2

Week 1: Introduction to Biomaterials Background history
Properties (Mechanical and Physico chemical) Properties (Mechanical and Physico-chemical)

Week 2: Mechanical properties
Mechanical properties
Resorbability,
biodegradation
Resorbability,
biodegradation Biofilm

Week 3: Biofilm
Biofilm
Material characterization - Analytical instruments Analytical instruments

Week 4: Analytical instruments Analytical instruments
Biological responses, compatibility, cytotoxicity Proteins, Tissue and blood Response
Cell-biomaterial interaction

Week 5: Animal trials (in vivo) Animal trials
Metals-types, classifications, applications
Metals - properties

Week 6: Metals - properties
Metals
Polymers-types, classifications, applications
Polymers

Week 7: Blends/composites Biopolymer s Hydrogels
Preparation of different morphologies (with experiments) Surface modifications (with experiments)

Week 8: Ceramics
Drug delivery systems/encapsulation Biomaterials for cardiovascular/pulmonary/ophthalmological applications Biomaterials for urinary/dental/skin applications Sterilization of implants, device failures, unique issues, conclusion

Books and references NIL

List of students completed
Medical Biomaterials

S. No	Name	Roll No
1	Punreddy akshitha	160121805034


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TITLE OF THE VALUE-ADDED COURSE:

Course code :CBIT/22BTV061

BIOREACTORS

No. of enrolled Participants-2

Duration of the Course: 8 weeks

ACADEMIC YEAR:2022-23

Bioreactors

Duration: 4 weeks

Credits: 1

Prerequisites: Ability to appreciate simple mathematical analysis

Course layout Week

1: Introduction

Week 2: Two important outcomes of a bioprocess: biomass (cells) and bio-

products **Week 3:** Common bioreactor operation modes, factors that affect

bioreactor performance **Week 4:** The cell view of a bioreactor

Books and references

Shuler, M.L. and Kargi, F. 2002. Bioprocess Engineering: Basic Concepts, Prentice Hall, Englewood Cliffs, NJ J. Bailey and D. Ollis, Biochemical Engineering Fundamentals; McGraw Hill, 1986. In addition, the students would be directed to specific sources during the course – they will become available during the course on the course page.

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**List of students completed
Bioreactors**

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1	Dhruv Tadikonda	160121805048
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TITLE OF THE VALUE-ADDED COURSE:

Course code :CBIT/22BTV041

Technology for clean and renewable energy production

No. of enrolled Participants-5

Duration of the Course: 8 weeks

ACADEMIC YEAR: 2022-23

Technologies For Clean and Renewable Energy Production

Course Duration: 8 weeks

Credits: 2

- Week 1: Introduction, characterization of coal and conventional routes for energy production from coal
- Week 2: Cleaner routes for energy production form coal
- Week 3: Characterization of crude oil and conventional routes for crude oilutilization
- Week 4: Cleaner routes for energy production form petroleum crudeWeek
- 5: Cleaner energy production from gaseous fuels
- Week 6: Solar and wind energy production
- Week 7: Production of hydro and geothermal energy
- Week 8: Energy production from biomass and wastes and energy conservation

Books and references

- 1.Miller Bruce G., Coal Energy Systems, Elsevier Academic Press, Paris 2005 2..Twidel, J. and Tony W., Renewable Energy Resources, Second Edition, Taylor& Francis 2006
- 3.Kreith F., Goswami D.Y., Energy Management and Conservation, CRC Press 2008
- 4.Sukhatme S., J Nayak J., Solar Energy: Principles of thermal Collection and Storage, 3 rd Ed., Tata McGraw-Hill Pulishing Company Ltd. 2008
- 5.Mondal P and Dalai A., Sustainable utilization of natural resources, CRC Press 2017

List of students completed
Technologies For Clean and Renewable Energy Production

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1	Divya prema	160120805008
2	P Sravani	160120805023
3	B Shreya	160120805027
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TITLE OF THE VALUE-ADDED COURSE:

Course code :CBIT/22BTV041

**Current regulatory requirements for conducting clinical trials in India for
investigational new drugs/new drug (Version 3.0)**

No. of enrolled Participants-5

Duration of the Course: 8 weeks

ACADEMIC YEAR:2022-23

Current regulatory requirements for conducting clinical trials in India for investigational new drugs/new drug (Version 3.0)

Course Duration: 8 weeks Credits: 2

- Week 1:** Lecture 0: Course overview
Lecture 1: Overview of Indian drug regulatory system
Lecture 2: Overview of drugs & cosmetics Act and Rules thereunder
Lecture 3: Overview of New Drug and Clinical Trials Rules, 2019
- Week 2 :** Lecture 4: Pre-clinical data requirements
Lecture 5: Rules governing clinical trials
Lecture 6A: Phases of clinical trial, forms, and fees
Lecture 6B: Regulatory pathway and data requirements for NDCT, 2019
- Week 3 :** Lecture 7: BA/BE study and study centres: Legal provisions
Lecture 8: Guidelines to conduct BA/BE studies
Lecture 9: Ethics Committee registration and re-registration
- Week 4 :** Lecture 10: Ethical considerations
Lecture 11: Good Clinical Practice
Lecture 12A: Requirements for import/manufacture of new drug/IND for conducting clinical trials in India
Lecture 12B: Requirements for import/manufacture of new drug/IND for sale/distribution and unapproved new drug for patients
- Week 5 :** Lecture 13: Important issues
Lecture 14: Special concerns
Lecture 15: Clinical trial related guidelines (NDCT Rules)
- Week 6 :** Lecture 16: Content of proposed clinical trial protocol
Lecture 17: Content of a clinical trial report
Lecture 18: Post marketing assessment and clinical trial compensation
- Week 7 :** Lecture 19: Common observations during submission of CT/BA/BE protocol
Lecture 20: Common observations during CT/BA/BE centre inspections
Lecture 21: Drug development process: Overview
- Week 8 :** Lecture 22: Salient feature of NDCT 2019 (What's new in NDCT?)
Lecture 23A: Online submission (SUGAM)
Lecture 23B: Online submission (CTRI)
Lecture 24: Tables given in NDCT 2019 and its content

Books and references

Drugs & Cosmetics Act, 1940 and Rules thereunder 1945, New Drugs and Clinical Trial Rules, 2019, Related Guidance documents available at CDSCO website.

List of students completed
Current regulatory requirements for conducting clinical trials in India for
investigational new drugs/new drug (Version 3.0)

S. No	Name	Roll No
1	Divya prema	160120805008
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4	Bahde Nithin R	160120805043
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TITLE OF THE VALUE-ADDED COURSE:

Course code :CBIT/22BTV047

HUMAN MOLECULAR GENETICS

No. of enrolled Participants-5

Duration of the Course: 8 weeks

ACADEMIC YEAR:2022-23

Syllabus

Course code: CBIT/22BTV047

Human Molecular Genetics

Course Duration: 4 Weeks

Credits: 1

Week 1: Fundamentals of central dogma (DNA, RNA and proteins; mutations), Chromosome structure and function (organization; structure- function relationship; chromosome abnormalities). **Week 2:** Genes in pedigree (Mendelian pedigree patterns, complications to pedigree patterns), DNA cloning and hybridization techniques (vector-based cloning; nuclei acid hybridizations; PCR-based DNA analyses)

Week 3: Mutation and instability of human DNA (mutation and polymorphism; pathogenic mutations, repeat expansions), Molecular pathology (types of mutations; animal models for human disease)

Week 4: Identifying human disease genes (functional cloning versus positional cloning; mutation screening), Complex diseases; The Human Genome and HapMap projects

BOOKS AND REFERENCES

Human Molecular Genetics 4 Tom Strachan, Andrew P. Read GarlandScience/Taylor & Francis Group, 2011


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**List of students completed
Human Molecular Genetics**

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1	Jyothika Meenakshi Kambhampati	160120805013


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Dept. of Bio-Technology
Chaitanya Saraswati Institute of Techno
Gandipet, Hyderabad-500 075.

TITLE OF THE VALUE-ADDED COURSE:

Course code :**CBIT/22BTV062**

Genome Editing and Engineering

No. of enrolled Participants-1

Duration of the Course: 12 weeks

ACADEMIC YEAR:2022-23

Genome Editing and Engineering

Course Duration; 12 Weeks

Credits: 3

Week 1:Introduction to genetics and genetic engineering

Week 2:Breakage and Repair Of Genomic DNA

Week 3:Recombination

Week 4:Targeted genetic modification

Week 5:Zinc Finger Nuclease (ZFN) Technology

Week 6:Transcription activator-like effector nuclease (TALEN) Technology

Week 7:Clustered regularly interspaced short palindromic repeats (CRISPR)/Cas9 technology

Week 8:Applications of genome editing in treating human diseases

Week 9:Genome engineered Disease modeling Week

10:Engineered immune cells for cancer therapy

Week 11:Personalized therapy; Challenges: safety and specificity

Week 12:Ethical concerns: Germ line gene editing

Books and references

Harber , J. E., Genome Stability: DNA Repair and Recombination , Garland Science, 2013.

Yamamoto, T. , Targeted Genome Editing Using Site-Specific Nucleases, Springer, 2015.

Zlatanova, J. and Holde, K. van, Molecular Biology: Structure and Dynamics of Genomes and Proteomes. Garland Science, 2015.

Yamamoto, T.(Ed.), Targeted Genome Editing Using Site-Specific Nucleases: ZFNs, TALENs, and the CRISPR/Cas9 System , Springer 2015.

Barrangou , R. and Oost, J. van der, CRISPR-Cas Systems: RNA-mediated Adaptive Immunity in Bacteria and Archaea , Springer, 2013.

Addgene, CRISPR 101:A Desktop Resource , January 2016

Alberts , B. , Johnson , A., Lewis , J., Morgan, D., Raff, M., Roberts, K.and Walter, P., Molecular Biology of the Cell, 6th Edn., Garland Science, 2014.

**List of students completed
Genome Editing and Engineering**

S. No	Name	Roll No
1	S Spoorthi	160120805032


HEAD
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